

# CONCENTRATION AND COMPETITION IN THE POULTRY INDUSTRY<sup>1</sup>

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## I. BACKGROUND

The Poultry industry is an important industry in the United States and Oklahoma. In 2008, broiler production was the second largest agricultural revenue generator in Oklahoma, trailing only income from cattle and calves. Broiler receipts have grown dramatically in the past fifteen years to \$663 million in 2008 compared to \$240 million in 1993.<sup>3</sup> In Eastern Oklahoma the industry is responsible for the rapid economic development that has occurred in this region over the last two decades. Many growers and integrators are pleased with their performance and that of the industry. However, some integrators and growers are not pleased with their performance and others have gone bankrupt or left the state for some other reason.

Over the last decade I have analyzed hundreds of poultry operations in addition to wheat, cattle and other farm operations in Oklahoma and surrounding states. The key point is that financial information is most frequently incomplete and it is difficult to reconstruct the information to determine strengths and weaknesses for the various major enterprises. This report provides a brief summary of my experience with the poultry industry to help guide future policy. The report is intended to provide the Department of Justice and Department of Agriculture with a picture of the industry based on available data.

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<sup>1</sup> The Department of Justice and the U.S. Department of Agriculture (USDA) second joint public workshop on competition and regulatory issues in agriculture held on May 21, 2010, in Normal, Ala., at the Ernest L. Knight Reception Center at Alabama A & M University.

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<sup>3</sup> Doye, Damona, Brian Freking, and Joshua Payne, "Factors Affecting Poultry Growers in Oklahoma" Oklahoma Agricultural Experiment Station Fact Sheet AGECE-202, Forthcoming, 2010.



## **A. Broiler Industry**

Prior to the World War II, poultry meat was principally produced as a byproduct of the egg industry. During the war, red meats were rationed but poultry was not, encouraging its consumption and leading to a surge in production. Following the war, more capital was allocated to production facilities and research; farms grew in size and broiler production became separated from other poultry or egg farming.<sup>4</sup>

Growth in farm size and the introduction of new technologies resulted in significantly increased capital requirements for broiler growers. This, along with the high variation in broiler prices, made broiler production an extremely risky business for farmers. Feed companies, who were interested in the growth of the industry because feed is the largest cost in broiler grow-out, established production contracts as a mechanism to enlarge the customer base while reducing financial risks faced by growers.

Production contracts encouraged the expansion of the broiler industry in the South, replacing the declining cotton industry in states such as Georgia, North Carolina, Arkansas, Alabama, and Mississippi. By 1955, almost 90% of the broiler industry was functioning with production contracts.

Largely in response to consumer demand for uniform and predictable quality, feed companies built processing plants and hatcheries, and became what are currently referred to as integrators.<sup>5</sup> Integrators are companies that own hatcheries, processing plants and feed mills,

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<sup>4</sup> Martinez, S.W. (1999), *Vertical Coordination in the Pork and Broiler Industries: Implications for Pork and Chicken Products*. Food and Rural Economics Division, Economic Research Service, U.S. Department of Agriculture. Agricultural Economic Report No. 777

<sup>5</sup> Vukina, T. (2001), "Vertical Integration and Contracting in the U.S. Poultry Sector", *Journal of Food Distribution Research*, Vol. 32(1), p. 29-38



and contract with independent growers who raise the broilers to a marketable weight.<sup>6</sup> When one firm synchronizes different stages in the production and marketing system, the term commonly applied by economists is “vertical coordination.” A higher degree of vertical coordination is often referred to as “vertical integration,” represented by common ownership of different stages in the production chain.<sup>7</sup>

Most of the value added to broiler products is in the processing plants where activities such as deboning and precooking are performed.<sup>8</sup> Processing plants require a substantial capital investment<sup>9</sup> as well as a guaranteed broiler supply, so independent processing and marketing of meat is ordinarily not a viable alternative for a grower. Because integrators must compete not only amongst themselves but with processors of other types of meat both domestically and internationally there is little flexibility in setting price. This lack of flexibility in setting price minimizes profit margins and forces the integrators to rely on large supplies to maximize returns on investment through maximization of sales per dollar of fixed assets. This actuality forms the rationale for grower production incentives.

Production contracts have evolved since they were first introduced as relatively simple open account arrangements, in which the feed company extended credit to the grower and was

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<sup>6</sup> MacDonald, J.M. (2008), The Economic Organization of U.S. Broiler Production. Economic Information Bulletin No. 38. Economic Research Service, U.S. Dept. of Agriculture.

<sup>7</sup> Perloff, J. (2001), Microeconomics, 2<sup>nd</sup> Edition. Reading, MA: Addison Wesley Longman, p. 501

<sup>8</sup> Vukina, T. (2001), “Vertical Integration and Contracting in the U.S. Poultry Sector”, *Journal of Food Distribution Research*, Vol. 32(1), p. 29

<sup>9</sup> Initial investment in hatching facility, feed mill and processing plant currently ranges from \$100-\$125 million (see: Cunningham, Dan (2009), “A Comparison of Farm Incomes for Poultry- & Non-Poultry-Producing Counties in South Georgia,” University of Georgia Cooperative Extension Circular 897 and <http://www.newsobserver.com/2010/03/31/414874/poultry-jobs-to-grow-in-nc.html>).



then repaid from the sale of the broilers.<sup>10</sup> In contemporary form, a typical contract specifies that the grower be enabled to use the integrators chicks and feed to add management, labor, energy, water and capital assets to return to the integrator a chicken of increased value. Because the integrators Return on assets (ROA) depends on maximizing the weight of each chick, the contract calls for a producer incentive based upon the pounds added to the batch of chickens given the number of birds and amount of feed provided. This per pound payment varies among growers and is determined by their relative performance. The typical contract calculates an average growing cost (referred to as the settlement cost) for flocks settled at the same time by growers in the same region. An individual grower's performance is then calculated as the difference between his actual settlement cost and this average.<sup>11</sup> Growers whose costs are below the average receive a higher payment, while those with higher costs receive a lower payment, subject to a floor, thus encouraging efficiency of operation.<sup>12</sup>

## **B. Benefits of Integration to Growers and Integrators**

Economists have studied and quantified the mechanism by which the structure of contracts in the broiler industry have promoted industry expansion, while benefiting growers, consumers and integrators alike. The two principal risks facing an industry participant are marketing (e.g. price) and production risks. Marketing risk arises from the volatility of prices, making predictions of costs or revenues difficult. Production risk reflects the uncertainty regarding the productivity of inputs and impacts of factors exogenous to production (e.g.

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<sup>10</sup> Martinez, S.W. (1999), *Vertical Coordination in the Pork and Broiler Industries: Implications for Pork*

*and Chicken Products*. Food and Rural Economics Division, Economic Research Service, U.S. Department of Agriculture. Agricultural Economic Report No. 777

<sup>11</sup> Knoeber, C.R. and W.N. Thurman (1995), “Don’t Count Your Chickens...’: Risk and Risk Shifting in the Broiler Industry”, *American Journal of Agricultural Economics*, Vol. 77(3), p. 486-496

<sup>12</sup> Vukina, T. (2001), “Vertical Integration and Contracting in the U.S. Poultry Sector”, *Journal of Food Distribution Research*, Vol. 32(1), p. 31



weather, pests and diseases). Production can be lower due to regional factors, such as extreme weather conditions or an epidemic, but can also be impacted by farm management skills as well as idiosyncratic factors, such as a malfunction in the cooling or heating system in a particular chicken house.

Knoeber and Thurman (1995) used panel data of growers to simulate whether, given the use of production contracts, the grower or integrator ultimately bears the price and production risks in the broiler industry. Their conclusion is that growers who contract with integrators take on significantly less risk than those who do not. They conclude that integrator companies remove approximately 97% of the risk from growers, compared to independent growers who bear all of that risk on their own.<sup>13</sup>

A financial symbiosis exists between integrators and growers that dictate a cooperative effort in the production of consumable poultry products of nearly 90 pounds per capita in the United States. Cunningham indicates that the costs to a typical poultry complex that includes a hatchery, feed mill and processing plant is roughly \$100 million while the production houses required to produce the chickens is \$80-90 million. Thus, both producers and integrators have a significant investment to protect through the production of poultry products. In addition, integrators Gross Profit on Cash Revenue (GPOCR) is typically in the 1% to 2% range while their Asset Turnover Index (ATI) is typically 2.5 to 3.0. This is not an uncommon financial profile for a processing industry. The strategy is to market large volumes with low margins to achieve the desired return on investment.

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<sup>13</sup> Knoeber, C.R. and W.N. Thurman (1995), “‘Don’t Count Your Chickens...’: Risk and Risk Shifting in the Broiler Industry”, *American Journal of Agricultural Economics*, Vol. 77(3), p. 486-496



A six year summary of financial performance for Tyson, the current integrator with the largest share of poultry sales is provided below.

**Tyson Financial summary**  
(Millions of Dollars)

	2009	2008	2007	2006	2005	2004	Average 2004- 2009
<b>Gross Revenue</b>	<b>\$26.7</b>	<b>\$26.9</b>	<b>\$26.9</b>	<b>\$25.6</b>	<b>\$26.0</b>	<b>\$26.4</b>	<b>\$26.4</b>
<b><u>Cost of Revenue</u></b>	<b><u>\$25.5</u></b>	<b><u>\$25.6</u></b>	<b><u>\$25.5</u></b>	<b><u>\$24.6</u></b>	<b><u>\$24.3</u></b>	<b><u>\$24.6</u></b>	<b><u>\$25.0</u></b>
<b><u>Gross Operating Profit</u></b>	<b><u>\$0.35</u></b>	<b><u>\$0.33</u></b>	<b><u>\$0.62</u></b>	<b><u>-\$0.08</u></b>	<b><u>\$0.81</u></b>	<b><u>\$0.93</u></b>	<b><u>\$0.49</u></b>
<b>GPOCR</b>	<b>1.29%</b>	<b>1.23%</b>	<b>2.29%</b>	<b>-0.30%</b>	<b>3.12%</b>	<b>3.50%</b>	<b>1.86%</b>
<b><u>Total Assets</u></b>	<b><u>\$10.6</u></b>	<b><u>\$10.9</u></b>	<b><u>\$10.2</u></b>	<b><u>\$11.1</u></b>	<b><u>\$10.5</u></b>	<b><u>\$10.5</u></b>	<b><u>\$10.6</u></b>
<b>ATI</b>	<b>2.52</b>	<b>2.48</b>	<b>2.63</b>	<b>2.30</b>	<b>2.48</b>	<b>2.53</b>	<b>2.49</b>
<b><u>ROA</u></b>	<b><u>3.26%</u></b>	<b><u>3.05%</u></b>	<b><u>6.02%</u></b>	<b><u>-0.69%</u></b>	<b><u>7.73%</u></b>	<b><u>8.84%</u></b>	<b><u>4.63%</u></b>

Source: <http://finance.yahoo.com/>

The growers on the other hand, have a relatively high GPOCR of 20-30%, not uncommon to agricultural producers. They also conform to producers of other agricultural products in having a low ATI of 0.15 to 0.40 (depending on the time of ownership of the poultry houses). Overall, the industry's profitability is captured largely by the growers who then must use these profits to pay for the production assets. The Asset Turnover or volume of sales per dollar of fixed assets is captured by the integrators who then must use these sales to pay for feed, chicks, and labor. The return on assets to both producer (grower) and integrator, and in fact to the industry as a whole, is in the range of 3% – 8%, but has been negative in recent years. Budgets developed based upon various studies of poultry enterprises in Eastern Oklahoma and



Western Arkansas between 2006 and 2007 are provided below. The 109 FSA farms is a summary of the data received from Schedule F forms in the three Oklahoma counties in the Illinois River Watershed (IRW). The 2545 houses in the 5 counties in the IRW was developed using producer panels. The OSU representative Farm Budget was developed by OSU extension personnel. The 240 farm Eastern Oklahoma Sample was developed using financial statements from lending institutions in Eastern Oklahoma. The USDA/ERS budget is for a sample from a larger region known as the Eastern Uplands<sup>14</sup> and is developed from the Agricultural Resource Management Survey (ARMS) and is for an average farm and not for an average house as provided by the other budgets. The final column provides an average of similar budgets. A summary of the financial performance for the entire U.S. Farm Sector is provided below for comparison.

### Sample Grower Budgets, 2006-2007

	109 FSA farms	2545 houses 5 IRW Counties	OSU Representative Farm Budget	240 Eastern Oklahoma Sample	USDA/ERS ARMS Sample from region	AVERAGE
<b>TOTAL OPERATING COSTS</b>	<b>\$20,000</b>	<b>\$23,534</b>	<b>\$24,501</b>	<b>\$19,992</b>	<b>\$56,479</b>	<b>\$23,407</b>
<b>TOTAL FIXED COSTS</b>	<b>\$26,636</b>	<b>\$23,584</b>	<b>\$29,100</b>	<b>\$25,561</b>	<b>\$33,788</b>	<b>\$28,771</b>
<b>TOTAL RECEIPTS</b>	<b>\$44,826</b>	<b>\$47,260</b>	<b>\$49,341</b>	<b>\$42,500</b>	<b>\$108,142</b>	<b>\$46,201</b>
<b>GPOCR</b>	<b>29.62%</b>	<b>26.40%</b>	<b>8.34%</b>	<b>21.83%</b>	<b>32.41%</b>	<b>15.32%</b>
<b>ATI</b>	<b>0.221</b>	<b>0.233</b>	<b>0.240</b>	<b>0.206</b>	<b>0.206</b>	<b>0.206</b>
<b>ROA</b>	<b>6.55%</b>	<b>6.15%</b>	<b>2.00%</b>	<b>4.49%</b>	<b>6.66%</b>	<b>3.15%</b>
<b>Variable Expense Ratio</b>	<b>44.6%</b>	<b>49.8%</b>	<b>49.7%</b>	<b>47.0%</b>	<b>52.2%</b>	<b>50.7%</b>
<b>Broiler Production - 24,000 broiler house-Contract Production, 5.5 Batches per year</b>						

<sup>14</sup> See: <http://www.ers.usda.gov/publications/aib760/aib-760.pdf>



## Agricultural Profits Still Strong

But the earnings still represent a low return on the total assets involved in Agriculture

Income Statement for U.S. Farm Sector						1999-2008 average
	2005	2006	2007	2008P	2009F	
\$ billion						
<b>Cash income statement</b>						
Cash receipts	240.9	240.8	288.7	324.2	284.2	231.8
Direct Government payments	24.4	15.8	11.9	12.4	12.6	17.4
Cash expenses	194.8	206.0	238.5	258.7	248.1	193.3
Net cash income	86.6	68.0	78.4	97.6	68.2	71.8
<b>Farm assets</b>	1,835,464	2,047,439	2,209,924	2,349,686	2,388,249	1,787,000
<b>Gross Profit On Cash Revenue (GPOCR)</b>	19.12%	14.45%	20.67%	19.54%	16.23%	16.62%
GPOCR with Government Payments	26.56%	19.71%	23.85%	22.50%	19.34%	22.43%
<b>Sales to Fixed Assets @FMV</b>	\$0.13	\$0.12	\$0.13	\$0.14	\$0.12	\$0.13
Sales to Fixed Assets @FMV w/GP	\$0.14	\$0.13	\$0.13	\$0.14	\$0.13	\$0.14
<b>ROA @FMV</b>	2.51%	1.70%	2.66%	2.70%	2.00%	2.14%
ROA @FMV wGP	3.84%	2.47%	3.20%	3.22%	2.48%	3.11%

<http://www.ers.usda.gov/Publications/Agoutlook/AOTables/>

## C. Performance contracts

Under the relative performance compensation system provided in the contract, producers who produce the heaviest flock of birds receive the highest price per pound of gain from the price scale. This contract provision provides an incentive for best management practices to maximize weight gain per unit of time by minimizing the occurrence and spread of diseases as well as minimizing losses due to morbidity and mortality. In addition, light intensity, timing and duration, bedding preparation, proper ventilation and temperature, and water and feed height at various points during the bird's growth are a few of the factors controlled by the grower that affects bird performance. As in the husbandry of most livestock, growth and performance is



often a function of the hours spent in the observation of animals and the adjustment of their environment based upon those observations. Thus, a higher price per pound of gain received often reflects more hours allocated to flock management.

As discussed above, in the integrated production system the poultry producers and poultry processors split the risks inherent in an industry as a whole into marketing risk and production risk. The processors agree to provide poultry producers with chicks and feed while the producer agrees to provide grow-out facilities and management. The processor agrees to pay a predetermined per pound price of gain for fully developed broilers with rewards and penalties for above and below average production performance. By agreeing to a predetermined per pound “merit” price of gain built around an average, the integrator has accepted the risk associated with changing market conditions that will affect price.

The grower agrees to use the processor’s chicks and feed and return a product (e.g. broilers) that meets certain standards. The standard is determined by mean performance criteria of other growers in the same area, using the same set of processor supplied inputs, during the same period of production. The variation in production outcome around the mean will be a result of grower’s facilities and management. Thus, the grower has accepted and manages the production risk and understands that this management and production risk will affect revenues through variations in yields as well as variations in the base price per the Net Pound formula agreed to in the contract. This formula determines the cost of production for the flock as a sum of the cost of the birds (number of chicks delivered times the price of each chick as stipulated in the contract) and the cost of the feed (pounds of feed delivered times the cost of the feed as stipulated in the contract). A Net Pound Value is determined by dividing the cost of production by the pounds of live birds delivered to the processing plant.



In current Oklahoma contracts a \$0.0001 decrease (increase) in the Net Pound Value (cost per pound) above the average for the flocks delivered during the same week by all other growers will result in a higher (lower) price per pound paid of the same amount. Thus, the integrator transfers the entire reward for efficiency (inefficiency) to the grower. This is an incentive for producers to deliver the largest number of pounds to the integrator to enable the integrator to maximize their ATI and thus their ROA. In this way, the financial symbiosis allows good producers to maximize profits and integrators to maximize ATI so the industry maintains a ROA that invites investment.

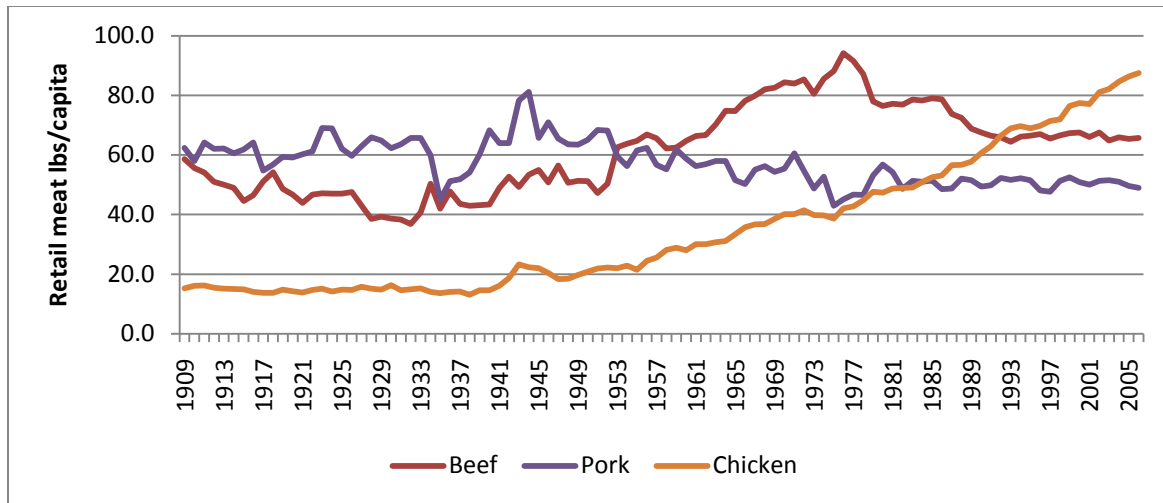
## II. RECENT CHANGES

Over the last decade changes within the industry have occurred to increase productivity and profitability. These changes include;

- New broiler Tunnel-Cool Cell house is more efficient and productive than the old ones.
- Average farm size increases above three houses.
- Average market age for broilers is now 47 days, same as ten years ago and one day less than twenty years ago.
- Average bird is heavier than it was ten years ago, 5.63 pounds live weight today compared to 5.03 pounds in 2000.
- Feed efficiency has increased to roughly 1.92 from 1.95 pounds/ per pound of gain.
- On-farm mortality rate has dropped from 5 percent in 2000 to an estimated 4.1 percent in 2009.
- Post-mortem condemnation rate has dropped from 1.22 percent in 2001 to 0.87 percent in 2009
- Per capita consumption of poultry continues to increase to nearly 90 pounds from less than 80 at the start of the decade.



### Pounds of Meat per Capita



### U.S. BROILER PERFORMANCE 1925 to Present

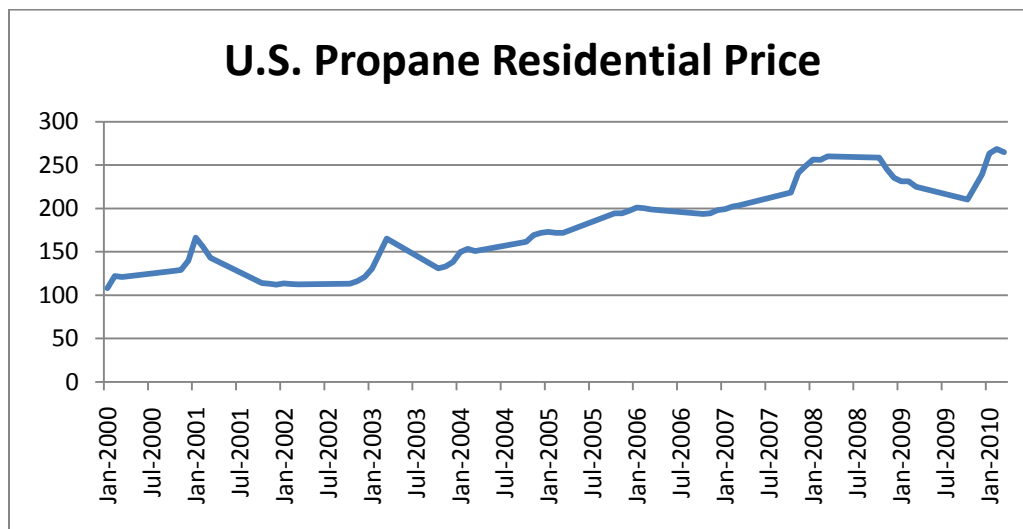
<u>I. YEAR</u>	<u>II. MARKET AGE</u> -----average days-----	<u>III. MARKET WEIGHT</u> --pounds, live weight--	<u>IV. FEED TO MEAT GAIN</u> --pounds of feed to one pound of broiler, live weight--	<u>Mortality</u> --percent--
1925	112	2.50	4.70	18
1935	98	2.86	4.40	14
1945	84	3.03	4.00	10
1955	70	3.07	3.00	7
1965	63	3.48	2.40	6
1970	56	3.62	2.25	5
1975	56	3.76	2.10	5
1980	53	3.93	2.05	5
1985	49	4.19	2.00	5
1990	48	4.37	2.00	5
1995	47	4.67	1.95	5
2000	47	5.03	1.95	5
2005	48	5.37	1.95	4
2006	48	5.47	1.96	5
2007	48	5.51	1.95	4.5
2008	48	5.58	1.93	4.3
2009*	47	5.58	1.92	4.1
2010*	47	5.63	1.92	4.0

\* Estimated      -- May 17, 2010      -- National Chicken Council



These trends indicate a continued increase in total production, productivity and efficiency and alone might indicate a continued growth in profitability, ATI and ROA for the industry. However, other major events outside the control of the industry have conspired to offset the effect of these changes on profitability including;

- The 1994 reorganization of USDA that placed the Farmers Home Administration (FmHA) under the Farm Services Agency. This effectively reduced staffing in FmHA and their ability to effectively manage the guaranteed loan portfolio. And, continued reduction in funding has further eroded staffing even while case loads have increased.
- Cheap and easy credit from local banks to new growers with no previous experience increased the grower failure rate.
- The Federal Agriculture Improvement and Reform Act of 1996 effectively eliminated government storage programs for feed grains and coupled with the fact that feed grain yields are increasing at a decreasing rate and increasingly more volatile has led to the increased volatility and increasing trend in real prices of these commodities.
- Reaching peak oil (maximum annual oil supply) reversed the declining trend in real energy prices and had a major adverse impact on grower profitability. Utility expenses have climbed from roughly 40% to more than 60% of variable expenses in the last decade.



- The world-wide recession and trade disputes reduced exports. Because exports approached 20 percent of total demand, reduced production is necessary to maintain profitability.

Quantity of broiler product exported and share of total broiler production that is exported:



Year	Pounds Exported	Percent of Production Exported
1999	4,585,000	15.6
2000	4,918,000	16.3
2001	5,555,000	18.0
2002	4,807,000	15.1
2003	4,920,000	15.2
2004	4,784,000	14.2
2005	5,203,000	14.9
2006	5,205,000	14.8
2007	5,904,000	16.5
2008	6,961,000	19.1
2009	6,835,000	19.5
2010	5,825,000	16.2 (projected)

The net effect of the industry trends and the exogenous events is the declining profitability for growers and integrators. The survival of the industry will depend on the ability of the industry to innovate to control costs and expand export markets. To assist in this effort some integrators have encouraged upgrades to facilities with price incentives and assisted growers with energy subsidies. In addition, some grower contract prices have increased by as much as one cent per pound over the decade in response to the increasing variable and fixed production costs. The table below indicates the price variation available to growers in Southeast Oklahoma. The minimum price is paid regardless of the Net Pound Value. An energy subsidy is provided for the two flocks produced in the winter months and the premium compensation is paid to growers that upgrade to the Tunnel-Cool Cell houses. In addition, an additional one cent increase may be gained by decreasing Net Pound Value (increasing production efficiency) above the average.



## Range in Pay

<u>2006</u>	<u>2008</u>
• <b>\$.0636/Net Pound</b>	<b>\$.0686</b>
• <u>High Net Pound Value</u>	
• \$.0536/Net Pound	\$.0586
• <u>Premium compensation</u>	
• \$.0491/Net Pound	\$.0511
• <u>Energy Allowance 2 Flocks</u>	
• <u>\$.049/Net Pound</u>	<u>Base Rate</u> <u>\$.0500</u>
• <b>\$.031/Net Pound</b>	<b>\$.0375</b>
• <u>Minimum</u>	

### III. GROWER PROFITABILITY

Without grower profitability the industry will fail. Market and production management factors that affect profitability have already been discussed. However, a major concern not previously mentioned is financial literacy of growers and bankers. Profitability is the portion of cash sales left over after paying for cash expenses. Over the last decade propane and electric prices have more than doubled while the move to the newer tunnel-cool cell houses has increased energy efficiency. However, the net result has still been an increase in utility bills. The additional cost of utilities combined with higher interest payments for new houses has offset the increase in average price to produce a lower profitability. In addition, the new houses have increased the total assets owned and thus have offset gains in sales due to per pound price increases to leave the ATI relatively unchanged. Hence the ROA for growers has declined. These changes are certainly part of the production risk growers assume. The Alabama Farm Financial Summary Report for 2009 provides a good example for this discussion. Over the five years (2004-2008) that the report covers the minimum number of poultry growers involved in the



Alabama Farm Analysis program was 13 and the maximum was 24. This is less than 1 percent of all poultry growers in Alabama and is a good indicator of the lack of financial literacy.

In addition, the average cost per pound for these growers has increased from 3.05 cents in 2005 (the lowest year) to 4.00 cents in 2008 while price per pound received changed from \$5.07 to \$5.99 between 2004 and 2008. Gross income has increased 32% from 2004 to 2008 while total operating expenses increased 35% over the same period. “In 2008 the average farm in this group received Total Operating Income of \$35,675 from 98,564 square feet. For a broiler operation with four 40 by 500 feet houses, this translates into Total Operating Income of about \$28,955, which is an increase of \$8,586 from 2007. This compares favorably to cow-calf producers. With an average herd size of 282 cows the top third had a Total Operating Income of \$34,686 but the bottom third’s Total Operating Income was \$-77,832.

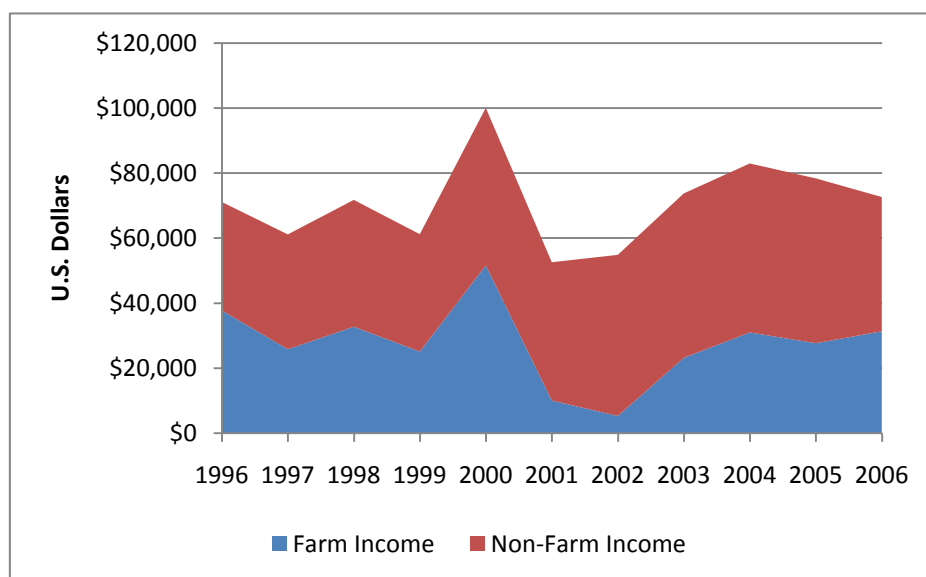
Bankers continue to give loans based on collateral or on external sources of income even though a task force on farm finance that developed generally accepted accounting principles in the mid 1980s, after the collapse of the savings and loan industry, indicated that these types of loans were inappropriate for agriculture and the source of many farm failures during that period. Recently the Oklahoma State FSA office issued a notice, “Guidance for Making and Servicing Loans to Contract Production Enterprises” to help stem the poultry loan defaults in Eastern Oklahoma.

Many new growers have no previous experience in poultry production and are typically small and mid-size farmers who desire to supplement their farm income with an additional enterprise to enable full time farm employment. Compared to all other farms, poultry

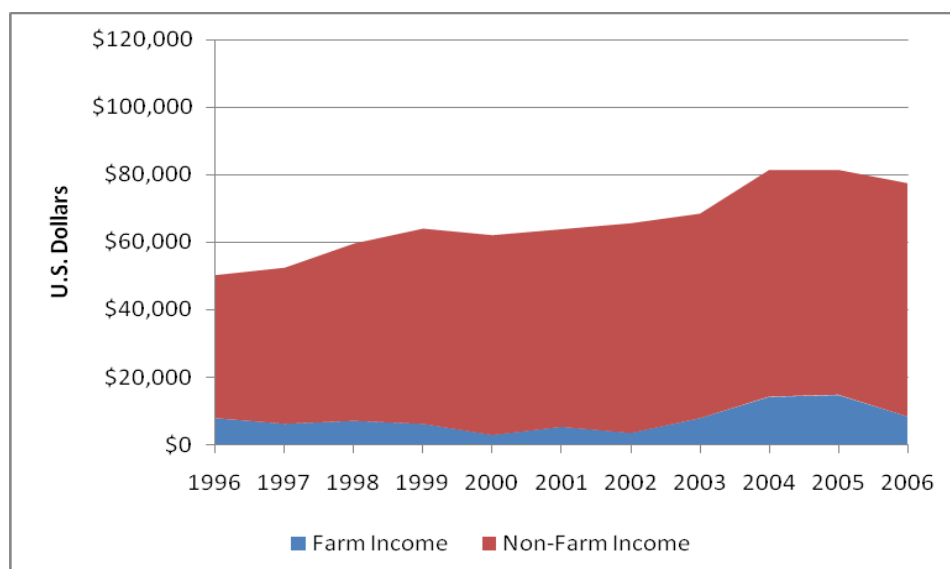


producers earn a substantially higher percentage of their total household income from their agricultural operation, as shown below.<sup>15</sup>

**Farm and Non-Farm Income for Poultry Producers, 1996 - 2006**



**Farm and Non-Farm Income for All Farms, 1996 - 2006**

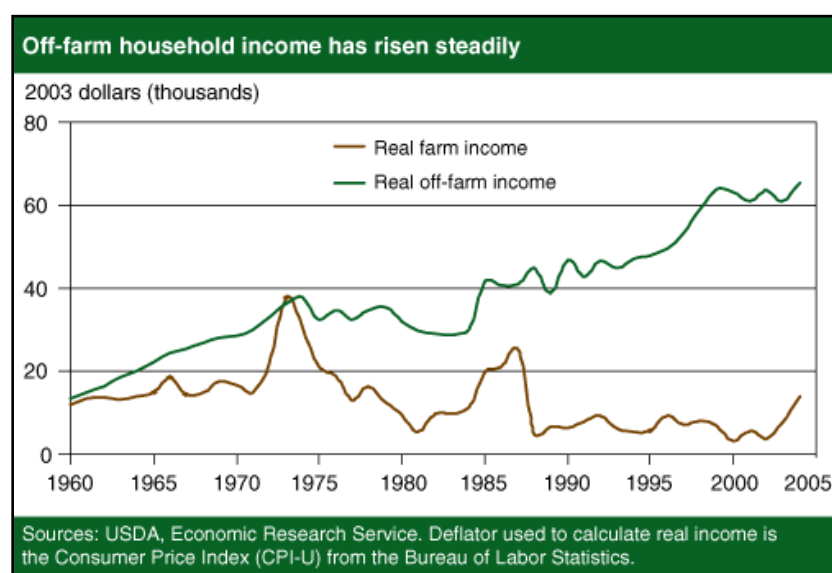


<sup>15</sup> U.S. Department of Agriculture/Economic Research Services, Farm Business and Household Survey Data: Customized Data Summaries.



U.S. agriculture has posted a steady increase over the last five decades in the number of households with both spouses working. Farm families are no different in this regard than non-farm families, and there is little difference among farm types. The number of farmers of all types receiving off-farm household income has “risen steadily over recent decades” due to increased off-farm job opportunities and increased on-farm technological advances, which have reduced the need for farm labor.<sup>16</sup> This trend is illustrated in the chart below.

### The Increase in Off-Farm Income, 1960 - 2005



Off-farm income is particularly important for the smaller size farm operations that are typical of most poultry growers (but not necessarily most poultry production). “While off-farm income constitutes the largest component of total farm household income on average, its share

<sup>16</sup> ERS/USDA, Fernandez-Cornejo, J. (2007), “Farmers Balance Off-Farm Work and Technology Adoption.” *Amber Waves*. Volume 5(1), pp. 23-27 at 24: “Off-farm income as a share of total U.S. farm household income rose from about 50 percent in 1960 to more than 80 percent over the past 10 years. On average, a farm household received about \$81,500 in 2004, netting only \$14,200 from farming activities. Earned off-farm income averaged \$48,800 and unearned income was about \$18,500 (Social Security, interest, etc.). Fifty-two percent of farm operators worked off-farm in 2004, up from 44 percent in 1979. Over the same period, the share of spouses working off-farm grew from 28 to 45 percent.”



decreases with farm size.”<sup>17</sup> As one study reports: “Most rural communities in the Southeast are receptive to broiler complexes because broiler contracts *tend to stabilize farm incomes* and create employment in feed mills, processing plants, and construction...”<sup>18</sup> In addition, the average poultry operation does not constitute a full time job for either a single person or a couple but does not permit the employment of both husband and wife in full time off farm employment..

In many rural locations, both the distance to town and the number and age of children provide incentives for farmers to engage in additional on-farm activities or enterprises to enable at least one spouse to be fully employed on the farm. The poultry production enterprise (facilitated by contracting relationships with integrators) has certainly provided this opportunity to the many small scale cattle operations throughout the Southeast.

Farmers as a whole tend to view the farm as a whole, through their Schedule F, rather than as a collection of enterprises with individual income statements and balance sheets. In this regard poultry growers are no different than any other type of farm and most other farms have a similar financial portfolio. A high profitability with low gross sales per dollar of fixed assets creates a situation where all of the profit must go towards the interest and principle payments. This typical financial situation created the idiom, “cash poor and asset rich”.

The high cost of fixed assets in most of agriculture has led to the problem of excess capacity as farmers are forced to use the asset to generate sales or lose it. In many agricultural

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<sup>17</sup> ERS/USDA. Fernandez-Cornejo, J. (2007), “Farmers Balance Off-Farm Work and Technology Adoption.” *Amber Waves*. Volume 5(1), p. 24. “Fifty-two percent of farm operators worked off-farm in 2004, up from 44 percent in 1979. Over the same period, the share of spouses working off-farm grew from 28 to 45 percent.”

<sup>18</sup> Molnar, J.J., Hoban, T. and Brant, G. (2002), “Passing the Cluck, Dodging Pullets: Corporate Power, Environmental Responsibility, and the Contract Poultry Grower,” *Southern Rural Sociology*, Vol. 18 (2), pp. 88-110 at 96, emphasis added.



industries this leads to supplies in excess of what the market can clear at a price that covers the cost of production. For roughly 6 decades the Federal Government used annual set aside programs to manage the excess capacity in feed and food grains to support price. In addition, there are roughly 135 fruit, nut, vegetable and other crops and products with federally authorized Marketing Orders that allow regional production associations to control the supply of production to the market as a means to manage excess capacity and thus price.

In the poultry industry vertical coordination allows integrators to manage excess capacity to manage price. Integrators can minimize the effect on producers by increasing the time between collection and delivery of birds or reducing the number of flocks per year rather than terminating grower contracts in much the same way the USDA requires all commodity program recipients to adhere to acreage reduction program guidelines and grower associations require members to cut back marketable output. Attempting to maintain supply levels would reduce price to levels unsustainable even in the short run. Because of the inelastic nature of the supply and demand a reduction in supply will produce an outcome more preferable to the industry than maintaining supply with a lower price.

Integrators provide budget guidelines for average producers so that potential growers and bankers can estimate “potential” profitability and the ability to service debt. Unfortunately many producers and bankers view these guidelines as guarantees without concern for idiosyncratic risks or the potential for declining markets. All farmers are faced with these same risks and further have no control over capacity management and thus historically have faced chronically low prices for which they have received government subsidies and supply management programs. However, most farmers are aware of the wide year to year variation in profit margins, sales and return on assets and are often reluctant to make major purchases of new



assets (e.g. land, equipment) based on a given year average. But in the poultry industry, many loans have been given based on these single year averages with little room for reductions in either sales or profit (increases in costs and constant sales). This is a failure to properly plan a five year projection with potential changes to costs and sales.

Without a contract and budget guidelines potential growers will likely not obtain financing. However, following financial failure upon obtaining financing, growers use the contract, loan and budget guidelines to seek damages for an inability to achieve the “expected” profits. In response some integrators have seized providing these guidelines and banks must rely on existing, poor financial information to make loan decisions.

Lenders and growers would like longer contracts but again integrators faced with legal action when contracts are abandoned due to plant closing are reluctant to provide the longer contracts.

#### **IV. GROWER ENTRY AND EXIT**

The number of all U.S. farms has been declining and the average age of farmers has been increasing for decades as a direct result of the intensive capital requirements of most agricultural enterprises. The increasing size of farms enables farms to capture technical, technological and pecuniary economies of size. Larger farms enable owners to spread fixed costs over more units of production yielding lower per unit costs (technical economies). Larger farms are better able to purchase new technology as the cost of the new technology will be less per unit of production (technological). And, larger farms can purchase larger quantities at lower per unit cost and sell in larger quantities for a higher per unit price.



While houses are the main capital item for poultry growers, land is the main capital for farmers and ranchers. The purchase of these assets is generally a poor business decision but may be a good investment decision. Most of these assets simply do not generate sufficient sales to deliver a competitive ROA. However, unlike land, poultry houses depreciate and thus ROA increases over time given profitability remains constant. This is similar to the farm investment in a new combine. In addition, land has multiple uses and has shown a long term increase in value. The value of poultry houses depends on the stability and growth of local or regional poultry industry. As long as the local poultry industry's demand for birds grows the value of the houses should remain stable as the integrator must manage a full capacity to maximize ROA. However, a decline in demand below full capacity reduces the earning potential of each house and thus its price and the departure of the industry from a local area or region may leave no alternative use for the poultry houses and thus bring a significant decline in asset value. This is a production risk faced by all businesses in producing commodities in a supply chain and is often not considered in the decision to obtain a loan by the grower or to give a loan by the local bank.

In analyzing hundreds of poultry operations, generally there is a total absence of financial documentation including income statement, balance sheet, financial ratios, cash flow statement or enterprise budgets. Most summarize the whole farm financial situation through the IRS Schedule F. Because the poultry enterprise is often the largest enterprise the results of the schedule F net farm income is used to discuss the profitability of the poultry enterprise. This has several problems including:

- a. The schedule F is a summary of all expenses and revenues attributable to the farm and does not separate costs and revenues by enterprise. The appropriate



tool for determining the actual costs, revenues and profit is the income statement for the poultry enterprise only.

- b. The Schedule F allows for deductions for family living expenses such as utilities, phone service, auto and truck expenses, labor and other items that may have been used in farm or farm related activities.
- c. The schedule F information provided by the growers is often incomplete, inclusive of more farm and home activities than just the poultry enterprise, and has numerous inconsistencies in how costs and revenues are described.

In addition, without a proper set of financial documents a grower has incomplete information for making decisions about upgrades, expansion, changes in day to day management or developing a whole farm business strategy.